



# **The Food Industry from Feeling Full to Fulfilment**

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## **Abstract**

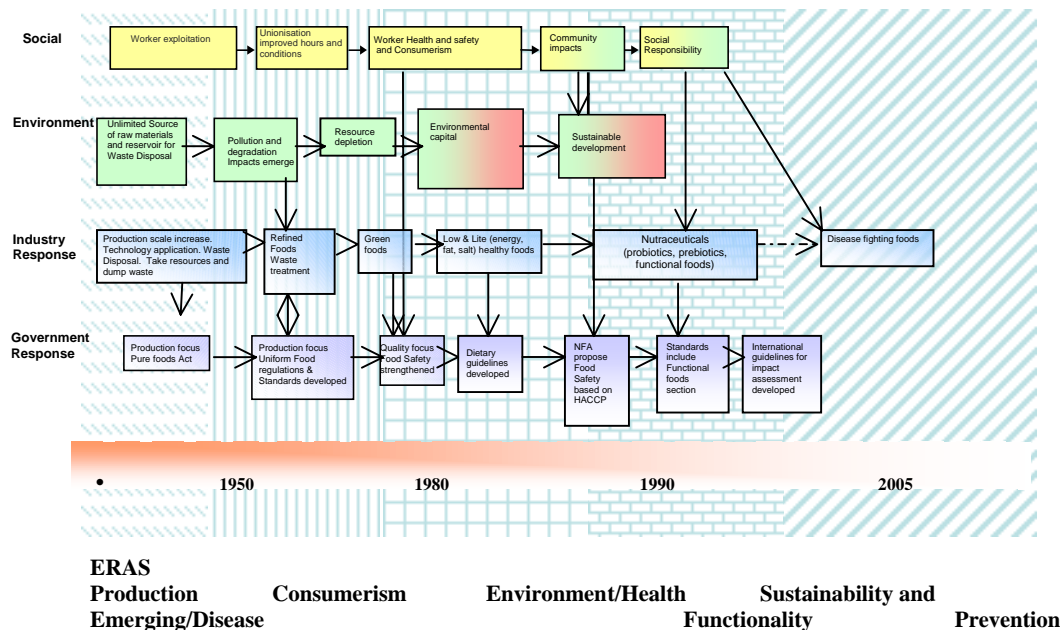
The foods developed and marketed by the Australian food manufacturing industry have provided an insight into the industry's evolution as it has responded to community expectations. The dominant societal expectations of the twentieth century are presented as eras. The expectations of each era continue to contribute cumulatively to each subsequent era, resulting in increasing complexity and sophistication of society's demands.

This evolution of the food industry's products and function is depicted by a conceptual framework, which portrays the inter-relationship between society, government and industry within each of the proposed eras. These eras are examined and used to explain why the current trend for change and functional expectations will continue to strengthen.

## **Introduction**

The evolution of commercial food products, although having been influenced by a number of economic, regulatory, and environmental factors, was most influenced by the expectations of society which initiated the major changes and acted as the true driver throughout the twentieth century. The dominant expectations of the food industry and food products have grown in complexity and sophistication over time from industry's obligation to its workers to a broader concept of social accountability and well being. As these expectations have evolved dominant themes have emerged in such a way that they can be seen to define distinct eras throughout the twentieth century (Figure 1).

Figure 1 Conceptual Framework of Eras and 'Drivers'



adapted from Wondur Holdings P/L, 2000

The drivers of change within each era gained an industry-wide focus and resulted in the evolution of processed food products and their associated marketing strategies. This paper outlines the way society has influenced the dominant themes of each era from a food manufacturing industry context.

### ***Production Era (1900-1950)***

The food manufacturing industry during the first half of the twentieth century was production focused. Australian society was more affluent after Federation in 1901 which provided an enlarged 'common market'. Market growth was also aided by increased expenditure and impediments to imports associated with the First World War (Boehm, 1993; Clark et al., 1996).

In this era a large proportion of the workforce was involved in unskilled/physical labour. The consumers expectation of food was to provide sufficient sustenance to meet energy requirements and for its satiety value.

Society's concerns with the environment were almost non-existent exhibiting an attitude that the natural environment provided an unlimited supply of raw materials and repository for waste.

While the community held narrow expectations in terms of food function it did require foods to be safe. Government and the courts responded with the introduction of the Pure Food Act in 1908.

Industry responded by continuous increases in production output of processed foods. This era also saw the world's first cannery open in England in 1912 (Fussichen, 2003). The same year domestic refrigerators appeared (Walquist, 1988) which eventually led to the development of new categories of products. In 1937 the iconic product 'SPAM' was introduced by Hormel, heralded by what may have been the world's first singing commercial. It was seen as nutritious and filling and needed refrigeration (Draeger, 1999)

### ***Consumerism Era (1950-1980)***

Australian manufacturing flourished during this era after the Second World War; and under the protectionism being pursued by government (Boehm, 1993; Clark, 1996). Australia became more independent as a nation, the influence of Britain weakened during the 1950s and attention was turned to

the Asian markets. Japan became Australia's biggest customer and Australian manufacturers felt the increasing pressure of imports (Clark, 1996).

Consumers became a political force and the Australian Consumers Association formed in 1959, gave them a voice. The publication of Ralph Nader's book '*Unsafe at any speed*' in the USA in 1965 gave the global consumer movement its mantra (Nader, 1965).

The food industry in the United States hoped consumerism was a passing fad. W R Murphy, the Campbell Soup Company's president, dismissed Nader's campaign for auto safety with the statement

"of the same order of the hula hoop – a fad. Six months from now, we'll probably be on another kick" (Bollier, undated, ch. 1).

In Australia the Trade Practices Act (1974) was passed by the Federal government and both the State and Federal governments appointed ombudsmen as independent adjudicators (Queensland Ombudsman Office).

The so called world food crisis of 1972-4 triggered new interest in the global availability of food in what became known as food security. This era saw the following milestones:

- The World Food Congress 1974
- The establishment of the International Food Policy Research Institute 1975
- The first meetings of the World Food Council (Maxwell and Slater, 2003).

While broader environmental issues had not yet captured the community's interest, during this era pollution had become an issue in the communities of developed nations. The following global milestones indicated the mood of the era (Worldwatch Institute, 2004):

- Publication of Rachel Carson's *Silent Spring*, (1962) exposing the hazards of DDT
- The first UN international conference on the environment (Paris, 1968)
- UN international conference on the environment (Stockholm, 1972), with the recommendation for the creation of the United Nations Environment Programme (UNEP)

Government response in Australia also tended to focus on the narrow issue of pollution and included:

- N.S.W Pollution Control Act 1970
- Establishment of the Department of Environment, Aborigines and the Arts (1972)
- Commonwealth *Environment Protection (Impact of Proposals) Act* 1974.

During this era the Australian food industry recognised the consumer as a new stakeholder, and with the introduction of television had a new medium to communicate with them. The industry needed to meet the numerous and often conflicting demands of the more zealous consumers. Globally the focus was on food security which in the main meant access to nutritionally adequate food (Maxwell and Slater, 2003). The local focus included the backlash against refined foods with 'fresh is best' becoming the catch cry (Peachy, 2004). Along with this was a requirement for convenience without perceived over processing or excessive packaging.

### ***Environment/Health Era (1980-1990)***

This era is distinguished by the influence of a series of international issues of historic significance (Worldwatch, 2004; Porter, 1993):

- The discovery of the AIDS virus in 1981
- UNEP conference (Stockholm +10) (Nairobi, 1982)
- Global Warming alert (USEPA, US National Academy of Sciences, 1983)
- The discovery of a "hole" in the Earth's ozone layer (1985)
- Surgeon General's Report on Nutrition and Health (1980s)

- National Research Council's Report - Diet and Health: Implications for Reducing Chronic Disease Risk (1980s)
- The Brundtland Report - Our Common Future , 1987)

Societal concerns embraced environmental issues such as pollution and its subsequent costs (financial and natural) and saw the progress from waste treatment to loss monitoring and waste minimisation, the beginnings of cleaner production (Kyle 1982; Parkin 1994). Community expectations of food moved to 'clean and green' where the produce was free of chemicals and the environmental damage limited through the restricted use of herbicides and pesticides to the emergence of 'organic' foods.

It was during the 1980s that scientific evidence was used to show the relationship between dietary intake and long-term health problems including chronic diseases. The public health community agreed more information on foods that promoted health and prevented disease was required. In 1984 a major cereal manufacturer began to place health messages on its high fibre products (Porter, 1993). It was during this era that scientific evidence linked the major causes of death (cancer and heart disease) with dietary patterns (Porter, 1993).

Concerns were focusing on the relationships between total fat consumption and cancer, serum cholesterol and heart disease, calcium and osteoporosis, dietary fibre and cancer, and sodium and heart disease (Porter, 1993). The food industry responded to these concerns with 'lite and low' foods that contained reduced salt and fat levels compared with standard products.

Changes to food labels reflecting compositional content became required practice.

### ***Sustainability and Functionality Era (1990 - present)***

During this era the warnings of the scientific community raised in the previous era on the state of the environment which had largely been played down by the governments of developed nations were gaining a foothold in the community consciousness, driven in part by the earth summits in Rio de Janeiro in 1992, Kyoto (Rio plus 5) in 1997 and Johannesburg (Rio plus 10) in 2002.

In addition to these all important summits, this era saw the following significant milestones:

- National Food Authority (NFA) proposed the introduction of HACCP-based food safety plans (1994) (Polya, 2001)
- The Garibaldi smallgoods incident and subsequent death of a four-year-old girl from food poisoning (1995)
- The British government confirmed a link between bovine spongiform encephalopathy (BSE) and Variant Creutzfeldt-Jakob Disease (CJD) (Underhill, 2003)
- The International Organization for Standardization (ISO) finalized the guide for environmental management systems ISO 14001 (1996)
- The introduction of the Triple Bottom Line (TBL) with the publication of John Elkington's book 'Cannibals with Forks' (1997)
- The launch of the Global Reporting Initiative (GRI) (1997) (Willis, 2003)
- The standard A18 on food produced using gene technology adopted by ANZFC (1998)
- Australia and New Zealand implement a joint food standards code for the first time (2000)
- The human gene count was determined to be only about 30,000 and not the more comprehensive 100,000 as previously expected (Worldwatch, 2004).



During the 1990s food safety became a major focus of the Australian consumer and favoured topic of the media. This was reinforced by the Garibaldi incident in 1995. The almost universal faith of the Australian public in the safety of locally processed food was shattered.

Concern with food safety was further compounded by community and media attention to potential fatalities associated with food allergies. A particular concern was the potential for allergens to occur due to the insertion of novel proteins in food sources by genetic modification (Food Industry Council of Tasmania, 2000, AIFST, 2003; Knowles, 2004).

Government responded with the establishment of uniform food laws across all jurisdictions and the development of more stringent labelling of packaged foods to mitigate associated health risks (Knowles, 2004).

Industry's response to this era's major drivers incorporated the recognition of environmental management as a mainstream issue. This included the industry adopting environmental management systems (EMS) in the same way that quality management systems had been in the previous era, as well as establishing corporate environmental management departments and appointing dedicated environmental managers. Initially these managers had their focus on waste minimisation strategies and waste treatment technologies, but progressively their attention broadened to include the reduction of environmental impacts. In more progressive industries such as the dairy processing industry the issues of sustainability gained focus.

This era saw a major consumer demand for health promoting foods that are not only safe and nutritious but will actually aid specific metabolic activities. The term 'functional food' was first coined in Japan in the mid-80s. "Functional foods are food components that provide demonstrated physiological benefits or reduce the risk of chronic disease, above and beyond their basic nutritional functions" (Agriculture and Agri-Food Canada, 2004). Functional foods can result from an added ingredient, processing or genetic modification (Senorans F.J. *et al*, 2003). Present market segments do not include products that have been genetically modified and are more preventative than exhibiting curative properties.

Functional foods have more recently been referred to as Nutraceuticals the market for which was valued at \$US 5.5 billion in 1997 increasing at a rate of 8.3% per annum (Freedonia Group Inc., 1998)

These products in the main rely on natural components albeit it may be enhanced to increase efficacy and effectiveness. The main categories nutraceuticals are generally divided into are minerals and nutrients, vitamins and herbal extracts (Wondur Holdings Pty. Ltd., 2000). Categories such as prebiotics and probiotics are also included as nutraceutical products.

### **The Emerging Era - *Disease Prevention***

The emerging era is one where society's expectations of industry will be far beyond that of previous eras. Accountability and transparency for all of industry's impacts, both direct and indirect is a concept gaining momentum.

To meet these demands Industry will have to embrace public reporting and reevaluate what it considers to be its boundaries of responsibility. For example socially responsible investment has emerged in recent years as a rapidly growing segment of the U.S financial industry involving \$US2 trillion in professionally managed assets (Schueth, S. 2003).

Transparency will also translate to marketing strategies and health claims that may be made. Claims such as vegetable oils being free of cholesterol and high fat foods being of reduced fat used in the previous era will no longer be accepted.

Community expectations of future food products will similarly be beyond that of previous eras, where dietary intake will need to accommodate an increasing ageing population and associated physiological requirements. As longevity and the maintenance of well being continue to influence social debate and purchasing choices, the food manufacturing industry will assume a greater role.

It is predicted that from 2010 the evolution of nutraceuticals will develop to the point where true disease fighting and health optimising foods will be commercially available and will include foods from genetically engineered sources. Examples of these products could include foods that provide paediatric vaccination and aid the cessation of smoking. This era could also include truly health optimising foods with disease prevention functions (Mertens, 2000).

## Conclusion

This review has attempted to chronologically place from a food industry context some of the dominant issues of the twentieth century. Issues that gained prominence through community concern. The progressive increase in complexity and sophistication of community concern has been portrayed as a series of eras. The review has also selectively shown the response of both industry and government to these concerns and more specifically the way the dominant concerns of each era have shaped the performance of the Australian food processing industry.

The eras depicted also reflect the increasing sophistication and influence of community values; which is demonstrated by the cumulation of concerns and resultant compounding of performance requirements from one era to subsequent eras.

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